

FOLIO

Royal Society Welcomes Five From U of A

The c.v.'s of five University of Alberta academics will have to be amended on 29 May. On that day Erwin Diener, Professor of Immunology; Milan V. Dimić, Professor of Comparative Literature; Duncan Fishwick, Professor of Classics; J. Gordin Kaplan, Vice-President (Research); and Gwynn Nettler, Professor Emeritus of Sociology, will become Fellows of the Royal Society of Canada, the most distinguished learned society in the country.

In announcing the names of the 1983 elected Fellows (there are forty-four in total), the Royal Society described them as "distinguished Canadian humanists and scientists." The five elected from this University are that indeed.

Dr. Diener, Chairman of Immunology since 1977, came to the University in 1970. He was co-director of the MRC Transplantation Group for seven years and is presently the Director of the MRC Group in Immunoregulation, a research body striving to gain a greater understanding of the body's immune reactions.

Dr. Dimić came to this University in 1966 as a member of the Department of Germanic Languages. He is credited with the establishment of the Department of Comparative Literature and was its first Chairman (1969-1975). He has served on many University, national and international committees, is widely published, and was founding editor of the *Canadian Review of Comparative Literature*.

Duncan Fishwick, an international expert on the Roman Empire and its local institutions, is a graduate of both Manchester and Oxford. He came to the University's Department of Classics in 1971 and is presently completing a major work on the Imperial Cult of the Latin West. His standing in the field of classics is confirmed by the numerous invitations he receives to present invited papers throughout the world.

J. Gordin Kaplan is the University's first Vice-President (Research). Born in New York City, now a Canadian citizen, Dr. Kaplan taught in the Department of Biology at the University of Ottawa for many years before coming to this University in 1981. A past-president of the Canadian Association of University Teachers (CAUT), Dr. Kaplan manages to find time for his own research activities in molecular and cellular biology in addition to his many administrative responsibilities.

Gwynn Nettler, Professor Emeritus of Sociology, is soon to leave the University after twenty years of distinguished service. He is author of nine books, including the best selling *Explaining Crime*, a third edition of which is now in press, and the recently released four-volume *Criminal Careers*. In 1982 he was honored by the American Society of Criminology with the Edwin Sutherland Award for his outstanding contributions to theory and research in criminology.

The Royal Society of Canada, established in 1882, is a national



A highlight of the Spring meeting of Senate was the noon-hour re-opening of Assiniboia Hall. Built in 1913, Assiniboia is the second oldest building on campus. In the late 1970s it was given a new lease on life when the Board of Governors reversed its earlier (and unpopular) decision to demolish the building. Reconstruction was completed last year. Taking part in the reopening ceremony were Chancellor Savaryn, Protocol Commissioner Doug Burns, President Horowitz, and Ron Phillips, Vice-President (Facilities and Services).

academy which strives to recognize high distinction and to stimulate achievement in the humanities, the social sciences, and the sciences by election to fellowships, and by the awarding of

medals, prizes, and scholarships. The 1983 Fellows will be inducted into the Society at its annual meeting to be held on 29 May at the University of British Columbia. □

General Faculties Council

The April meeting of GFC was short and to the point. As such, it was a rather gentle "introduction to the system" for new student members of Council who were welcomed to their first meeting by President Horowitz.

Representing six Faculties, the 1983-84 undergraduate student representatives to Council are: A. George T. Scott, Agriculture and Forestry; Steve Dalla Lana, Teresa Gonzalez, Jocelyn Huculak, Jaqueline

MacDonald, Ken MacDonald, Don Millar, and Richard Thomas, Arts; Christine Ens, Michael Grant, and Robert Lunney, Business; Siobhan Avery, Kim Hula, and Eric Perrault, Education; Robert Koch, Joseph P. Moreau, and Wenona Urquhart, Engineering; and Douglas Chepeha, Braden Cormack, Brendan Cormack, Kerri Kamra, David Koch, and Anton Melynk Jr., Science. In introducing the new representatives to the tech-

nical wonders of the Council Chamber (i.e., the voting system), Dr. Horowitz offered the light-hearted suggestion, "If you don't know which way to vote, just look in my direction!"

The tone of the meeting was far from light-hearted, however. In his quarterly report of the Academic Development Committee, George Baldwin, Vice-President (Academic), reiterated the very real concern that he shares with his colleagues regarding what he termed the present "intolerable set of circumstances" (increased enrolment coupled with decreased funding). He outlined a three-phase plan to "survive" the situation: (1) strict enforcement of application deadlines, a general warning about course availability for January enrolment, and reduced availability of high-school make-up courses; (2) a University-wide increase in entrance requirements, to be set in place by the fall of 1984. "In time of such a great enrolment crisis, we cannot afford to teach marginal students," he explained; and (3) the establishment of a Vice-Presidential committee which will explore the long-range

question of quotas, particularly as they relate to those Faculties like Arts, Science, and Education which are traditionally exempt from the quota system.

In concluding his remarks, Dr. Baldwin emphasized the need to act. "We badly need a plan, and we do not have much time to develop it," he stated.

After a brief report from Ron Phillips, Vice-President (Facilities and Services), in which he outlined some issues concerning space utilization, Dr. Horowitz gave his report of the Planning and Priorities Committee. He concurred with the position expressed by Dr. Baldwin, referring to the present financial situation as "very distressing."

Council members then dealt with recommendations placed before them by the GFC Writing Competence Committee (WCC) in regards to a joint WCC/ATA Report on the Writing Competence of Alberta Secondary Students. The Report, described by Beverly Mitchell, Chairman of the WCC, as "a compromise document," has received mixed reactions. After some discussion, it was agreed that GFC receive the Report for information, and refer many of its recommendations to the Faculty of Education for study and response to GFC by Spring 1984. In addition, copies of the Report and appendices will be forwarded by GFC to a number of agencies and organizations affected by the various recommendations. (The question of writing competence will be explored in more detail in a future issue of *Folio*.)

The final item of business was a request by the Campus Law Review Committee (CLRC) to increase its composition to include an additional student-at-large, and an additional staff member. According to Paul Sartoris, Acting Dean of Students, the CLRC faces "a lot of square one work" with respect to philosophy and issues, and additional members of the committee will be most valuable. □

Turbulent Times Ahead, Warns Dean of Arts

The two major influences in the '80s are unemployment and high technology. And universities are not being spared the resulting turbulence.

Such was the thrust of a speech given recently by Terry White, Dean of Arts. Speaking to nearly 200 members of the long-standing Friends of the University at their annual meeting on Monday, 25 April, Dean White painted an alarmingly realistic picture of rocketing class sizes, diminishing financial and human resources, and a negative-growth job creation pattern.

"The scarcest commodity of the '80s will be a job," he predicted, emphasizing the enormous pressure this places on universities which risk becoming "parking lots for the unemployed."

Citing statistics that clearly disturbed his audience (in the Faculty of Arts alone, for example, an *additional* 12,104 half-year courses were taken during the 1982-83 academic year), he criticised government for its "wait and see" attitude which he termed minimal at best. But he praised his Faculty for the "marvellous job" it has done in adapting to the enormous enrolment increases.

Addressing the often controversial question of quotas, Dean White warned that this University, as others across the country, is now at a point of having to address some very difficult questions—questions dealing with ultimate size of the student population; the very real possibility of quotas in Arts, Science, and Education; and arrangements that will have to be made for those who will, by necessity, be turned away. He suggested that an important debate for the future will be the role of the university, and stressed the need for universities to keep up with the changing times.

The Friends of the Univer-

sity first met in 1943. The purpose of the group, now numbering more than 300, is to work in the interests of the University, trying to help meet needs that might not be financed through normal budget procedures. Since 1956, for example, the Friends have sponsored the annual Henry Marshall Tory Lecture, a series which has brought to campus such distinguished speakers as James M. Minifie, Wilder Penfield, Northrope Frye, Phillip Tobias, and, last year, Harold Masursky, a planetary geologist of international acclaim.

In addition, the Friends have made important contributions to the University for badly-needed research equipment and valuable library acquisitions.

The annual dinner of the Friends is traditionally combined with its annual business meeting. This year, out-going Chairman R.E. Folinsbee welcomed R.J. Buck as his successor. Those wishing more information on the Friends of the University may contact Dorothy Steiner, Secretary-Treasurer, telephone 435-2204. □

Estevan (Steve) Gomez, 1918 - 1983

Steve Gomez, staff member of the Department of Electrical Engineering since November 1967, died on 15 April 1983. He was sixty-four years old. Mr. Gomez was an integral part of the department; he will be missed by all his friends and colleagues on campus who came to know him over the years. □

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Prince Charles to Receive Honorary Degree

His Royal Highness Prince Charles is to be conferred an honorary Doctor of Laws degree at a Special Convocation to be held in his honor on Thursday, 30 June, in the Northern Alberta Jubilee Auditorium, beginning at 2 p.m. Prince Charles will be presented to Convocation by Myer Horowitz, following which he will deliver the Convocation Address.

His Royal Highness is heir apparent to the throne. In 1952, following the accession of Queen Elizabeth II, Prince Charles became Duke of Cornwall under the charter of King Edward III which automatically gave that title to the Sovereign's eldest son. In addition, he became Duke of Rothesay, Earl

of Carrick and Baron Renfrew, Lord of the Isles and Prince and Great Steward of Scotland. In 1958, at the pleasure of the Queen, he was made Prince of Wales and Earl of Chester, although his Investiture as Prince of Wales did not take place until 1 July 1969.

Prince Charles was educated at Cheam School (a preparatory school which had been attended by his father, the Duke of Edinburgh) and at Gordonstoun, on the Moray Firth (which his father also attended). The first of the Royal Family to attend a Commonwealth school overseas, he spent part of 1966 as an exchange student at the Geelong Church of England Grammar School in Melbourne, Australia. Prince

Charles is a graduate of the University of Cambridge, receiving his baccalaureate in history in 1970.

Chancellor of the University of Wales since 1977, Prince Charles has been the President of the International Council of United World Colleges since 1978. He is the second member of the British Royal

Family to accept an honorary degree from The University of Alberta. In 1919, his great uncle, then Prince of Wales, received an honorary Doctor of Laws from this University.

While in Edmonton, Prince Charles, accompanied by Princess Diana, will officiate at the opening of the 1983 World University Games. □



Prince Charles, colonel-in-chief of the Royal Regiment of Canada.

Walk, Don't Run

Shortly before noon on 20 May, President Horowitz will set aside his work, put on his walking shoes and leave 3-1 University Hall for "The President's Walk," an east side, west side, all around the campus affair.

In conjunction with University of Alberta Physical Activity Day, Dr. Horowitz and Art Burgess, Fitness Coordinator, will help lead a host of walkers around a figure eight course of about four kilometres. (People will have the option of negotiating half or all of the course.)

Members of the Board of Governors, a large group of aerobic dancers, the Golden Bears football team, a number of wheelchair athletes, senior citizens attending Spring Session, and various musical groups and pipers have agreed to participate. Dr. Burgess, a.k.a. Mr. Perpetual Motion, has upwards of 100 people promoting the walk in their respective departments and offices.

"We have it on good authority that the sun will shine, the birds will sing, and the flowers will smell," he said at the close of last week.

The walk will start at 12:10 p.m. and, as the President remarked earlier, "You'll need only to step out of your work

location to join us."

Further details of the walk will appear in next week's *Folio*. □



The President's Walk

This Week's Quote

"There is nothing like working with soggy maps in a breeze-way."

Source: R.E. Phillips, Vice-President (Facilities and Services), at the 25 April meeting of GFC. Mr. Phillips was referring to a proposal to convert the Tory breezeway into classroom space, a move that would help resolve some space shortages for some departments and for the Tory building, as well as eliminate the problem of water seeping into the map collection located below the area in question. □

The Road to Collaboration

Urging his colleagues from across the country not to lose sight of their perspective, Myer Horowitz summed up the recent Conference on the Business Community and the University by stressing the importance of reflection, analysis, and planning for the future.

The conference, jointly sponsored by the Association of the Academic Staff of the University of Alberta, the Canadian Association of University Teachers, the Institute for Research on Public Policy, and the Confederation of Alberta Faculty Associations, brought to Edmonton some highly qualified representatives of business and industry and a wealth of concerned academics from across Canada.

Meeting at the Four Seasons Hotel, the registrants were asked to consider a number of important issues by politicians Bob Stanfield, Serge Joyal, Bette Stephenson, and businessmen including Ted Best, Chairman of the Board of Governors of the Canadian Petroleum Association; Donald Chisholm, Executive Vice-President of Northern Telecom Ltd.; and Keith McWalter, President and Chief Executive Officer of Gulf Canada Resources.

Themes that surfaced early on were the critical role of a liberal

education and the importance of two-way communication. "We must have dialogue between universities, industry, government, and the public," said Ted Best, "but I believe that free choice continues to offer the best means for matching the future needs of industry with the future supply of graduates. Only when students are free to pursue their own interests and inclinations in choosing courses and disciplines leading to careers will we serve all of society."

Larkin Kerwin, President of the National Research Council, in an eloquent defence of a liberal arts education, stressed the importance of a university producing "the thinking, critical person, cognizant of where society is going and armed with a balanced set of facts and techniques, a person for the information age." And he emphasized the key role that research plays in distinguishing a university from other institutions. "Take away research and you have an institution duplicating things that are all done elsewhere. Keep only the research and you have a university still."

Dalton Camp, syndicated columnist and member of the University of New Brunswick's Board of Governors, cautioned universities against "starving the

humanities to feed the sciences." And he echoed the feeling of many at the conference who urged universities to hone the communications skills of both staff and students in order to do a better job in reaching their various publics.

Donald Chisholm sparked lively debate with his charge that university research is often irrelevant and rarely applicable to business and industry. And Keith McWalter was frank in his appraisal of the lack of communication between industry and the academic. Describing the relationship as one of "mutual condescension, mutual ignorance, mutual convenience, and mutual intolerance," he told the audience that the initiative for future dialogue must rest with the university community.

Eric Geddes, a partner in Price Waterhouse and past chairman of the University of Alberta Board of Governors, emphasized the important role in communication that must be played by the government. And he challenged universities and business to deal with the question of the control of intellectual property. He urged universities to create institutional mechanisms whose purpose would include passing on research initiatives and establishing marketing research plans.

A disappointment to some of the participants was the lopsided representation. Only ten percent of those in attendance came from the business community. What appeared to be absent from the group were "reactionary, hard-nosed business types," said George Baldwin, Vice-President (Academic). "The business representatives that were there were of a very high quality—star performers. But I have the uneasy feeling that to a certain extent we found in them our sympathetic alter-egos." The organizers had anticipated this, according to Gordon Fearn, President of the AASUA. "We knew when we first started planning for the conference that the

business community would be hard to reach. I could get angry about the lack of involvement in some areas...but there is little point in that. We heard from some of the very best in the country, and we'll reach others through the supplement." (The *Financial Post* is preparing an eight-page supplement on the conference to be published on 14 May.)

Dr. Horowitz applauded the conference organizers for their initiative and foresight. And he acknowledged the very real concerns raised during the sessions. But he reminded the audience that since "not all the players are here" it was important to place the conference in perspective and to be prepared to collaborate at all levels.

(Copies of selected speeches presented at the conference and tapes of the sessions are available by contacting Don Wilson, Director, Conferences and Seminars, IRPP, 275 Slater Street, Ottawa, Ontario K1P 5H9.)□

Correction

The 'People' column (*Folio*, 7 April 1983) mentioned that, in the 1982 William Lowell Putnam Mathematics Competition, this University's team achieved its best showing ever. The sentence in question should have read, "This is the third best showing in the history of the Department of Mathematics, which received honorable mentions in 1948 and 1969."

Summer Publishing Schedule

During June, July and August, *Folio* will be published bi-weekly. The bulletin will appear on 9 and 23 June, 7 and 21 July, and 4 and 18 August.

Current deadlines will remain in effect.

Folio will return to a weekly publishing schedule in September.□

Summer Temporary Employment Program

The following communication was included in Personnel Services and Staff Relations' Communication Bulletin, Volume 10, Number 1, 8 April 1983. In the interest of ensuring that the information concerning the Summer Temporary Employment Program (STEP) is received by all interested faculty and staff, Personnel Services would like to bring this worthwhile program to readers' attention again.

We have received notification from the Government of Alberta, Department of Manpower, that the University is for the first

time eligible for assistance under the Summer Temporary Employment Program.

Detailed guidelines and application forms are available from Personnel Services and Staff Relations by calling extension 5201. The program application deadline is 15 May 1983.

Further information on the program may be obtained directly from the Special Manpower Programs Branch at 427-4740.□

New Research Theme of Strategic Grants Program

The Social Sciences and Humanities Research Council has approved the allocation of \$280,000 for a new program of research support on the theme of "Women and Work." The program will be part of the Council's Strategic Grants programs which are currently supporting research on other themes of national importance.

The new program will have three components. There will be seed money grants to enable scholars to develop research proposals for presentation to the Council; special research grants for individuals or groups of individuals working on projects of a multidisciplinary nature, inside or outside the university; and grants for workshops aimed at developing research skills and exchanging information on existing research or on research methodologies and design.

Detailed guidelines of the new program are expected to be made available to the Office of Research Services shortly. In the meantime, enquiries may be directed to the Strategic Grants Division of the Council (Norman Dahl—613-995-9330).

The closing date for application is 1 August 1983. Please allow at least ten working days for processing and mailing the application.

On the home front, the Office of the Vice-President (Research) has established a new University of Alberta fund, the Endowed Research Account (ERA), to which donations have already been made. University staff and the general public are invited to earmark contributions to the 75th Anniversary Appeal for this new research fund. All donations are income tax deductible. In-

come from the principal amount will be eligible for a matching grant from the Alberta 1980s Advanced Education Endowment Fund. The University's re-

search function will receive further support from revenues generated by this general purpose research endowment. As the principal grows, so will the revenues. □

Medic Canada '83

The words "early registration is advised" appear in red on the Medic Canada '83 registration form. Sage advice, for Medic Canada '83 Toward the Year 2000 is an international conference and exhibition *par excellence*. Nobel Laureates A.M. Cormack, University Professor at Tufts University, and Rosalyn Yalow, Chairman, Department of Clinical Sciences, Montefiore Hospital and Medical Center, will participate in the 29 to 31 May conference at the Edmonton Convention Centre.

Eight simultaneous sessions will be held. The titles are: "Biotechnology—A Worldwide Perspective;" "Latest Developments in Medical Diagnostic Technology;" "Newest Developments in Therapeutics;" "Computers in Medicine;" "Nuclear Imaging;" "Medical Devices;" "Biomedical Engineering;" and "Pharmaceutical."

The University's Department of Continuing Medical Education and the Alberta Heritage Foundation for Medical Research planned Medic Canada '83 in cooperation with the sponsors, the Canadian Association of Manufacturers of Medical Devices and the Government of Alberta.

Professor Cormack, a leader in the development of computer-assisted tomography, was awarded the Nobel Prize in Medicine or Physiology in 1979. This was the first award for computer applications in medicine.

Dr. Yalow won the Nobel Prize in Medicine or Physiology in 1977 for her work in developing radio-

immunoassay.

Among the numerous speakers are three from our University: Michael Longenecker, Department of Immunology and MRC Group on Immunoregulation; Yves Fouron, Vice-President, Marketing and New Products, Chembiodmed Ltd.; and Richard Rossall, Head of the Division of Cardiology.

Chembiodmed Ltd., the University-owned company that manufactures and sells chemical filters for blood transfusions, will share an exhibit with the University.

Also participating in Medic Canada '83 are the Canadian Medical and Biological Engineering Society and the Pharmaceutical Manufacturers Association of Canada. The Alberta Hospital Association will hold concurrent education meetings.

In addition to the various sessions, the conference will present an international exhibition which will showcase the products of twelve countries and several Canadian provinces. Displayed will be the most advanced equipment, devices, hospital supplies, disposables, computers, patient care and monitoring systems, pharmaceuticals, clinical laboratory instrumentation from the world's top suppliers, manufacturers, consultants, laboratories, and government organizations.

Registrants will tour a number of sophisticated health facilities including the Walter C. MacKenzie Health Sciences Centre and the University's Faculty of Medicine. □



M.V. Subbarao, Professor of Mathematics (left), presents Larry Henderson, Administrator of Student Awards, with a donation of \$1,500 to set up the Mathukumalli Venkata Subbamma Award. The award, endowed by Professor Subbarao and his family in memory of his mother, will be awarded annually to an undergraduate student (pass or honors) of any Faculty who has shown outstanding academic ability in Number Theory, as judged by his/her performance in at least one Number Theory course, and whose academic record is otherwise satisfactory. Vincent Harris, Professor of Mathematics at San Diego State, recently added to the endowment. The first award will be presented next year.

Seventy Times Seven

Larkin Kerwin, President of the National Research Council, gave the following address at the recent Conference on the Business Community and the University.

When Christ was asked the number of times one should forgive repentant sinners, His questioner told Him "Some say seven, others seven times seven." Christ's reply was that our patience should stretch even further—to "seventy times seven." During the Reformation, sermons were preached about the magic number so revealed, which is 490; and many a pulpit thundered about the awfulness of the four hundred and ninety-first sin that would go over the limit established by Christ.

As so often happens, however, these famous words were misconstrued. I am told that current mathematical scholarship interprets the Aramaic expression as meaning not what we mean by "seventy times seven" but rather what our notation records as "seven to the seventieth power." "Three times three" to these ancients was the manner of expressing 27 - not 9. In this construction, "seventy times seven" is about 1.4×10 to the 60th power—far greater than all the stars in gigabillions of galaxies. Christ was saying that there were no practical limits to human patience in a good cause, or to God's mercy.

I adduce this example partly as a curiosity. In fact, human interest in cabalistic numerology has declined as our sciences have become, paradoxically, more numerical. Figures are vital for our society, yet they have also become so commonplace that they have lost their mysticism. How many of us attach the importance that our great-grandparents did to the numbers seven, thirteen, or forty? Yet the first of these, seven, has some significance even for the theme of this meeting, if one thinks of that foundation of liberal education: the Seven Liberal Arts.

What were, and are, these liberal arts? They were divided into the higher learning, or quadrivium, of Arithmetic, Geometry, Astronomy and Music. To them were added the lower learning, or trivium: Grammar, Rhetoric and Logic. These are quaint names, but to many they sound like just what the doctor ordered to improve today's curricula. The hierarchy also seems to fit very well with the preoccupations of the immediate future's high technology needs. Naturally, these Seven Arts did not quite correspond to our own definition of them. Arithmetic included cabalistic analyses of numbers and Grammar was not the syntax which linguists now study but rather a blend of what we should call speechmaking and psychology—the politician's art. The term liberal derived from the Latin "liber", and the Seven Arts were considered those becoming the free person.

The Liberal Arts

You have asked me to contemplate with you the relevance of current university education, including four particular points: its basic tenets, its evolution from teaching wisdom to teaching facts, whether there is any more a distinction in being a university graduate, and the association of education with research in the university. The teaching of the Liberal Arts is a good reference from which to start. Very well. Let the grim work begin with Seven.

Although the liberal arts evolved over the centuries, the principle behind them remained, till recently, all but unchanged. Until about two hundred years ago, Western culture construed that men and women, free to learn, were best embellished by knowing how to think, reason, express themselves, analyze data, sift evidence and opinion, judge, and so

take their place in polity. It was, and remains, one of the noblest ideals of our tradition: a framework for knowing both the world and oneself, and an investment in that communal enterprise that best molds the individual. To touch then on your first point, these are the basic tenets which even today, hidden by the overgrowth of exploding curricula, may be vaguely discerned as the intention of our universities' teaching role. To think, to reason, to sift, to judge....

Alas, events have proved this ideal too fragile to endure the stresses of acceleration. For one needs leisure to weigh and consider; time to digest facts and convert them into the nourishment of learning. Time is precisely of what our modern world has least. Beginning perhaps with the Industrial Revolution and continuing through our subsequent revolutions of mass production, mass consumption, electricity, atomic energy, and now infinite information, the pace of living has rushed on. Who among us has the time to ponder Cicero, or polish his understanding of *modus tollens* in the syllogism? How many of us, in our headlong flight to master the stock market or the new Constitution, can create an interval to think about the duties a citizen has to his state? Webster's Dictionary, in fact, defines the liberal arts as "distinguished from technical or professional education"! Must we infer that it is impossible to be a scientist, a dentist, an agronomist or engineer, and be 'educated' in the liberal arts sense? This brings us to the second of the points you wished discussed: to what extent has the university evolved from teaching wisdom to teaching facts? Has this destroyed its basic tenets?

Wisdom Rather Than Facts

Certainly, it is of no use to "sit

upon the ground and tell sad stories of the death of curricula." Like it or not, our time is upon us; to ponder Cicero and ignore economics would doom us all. Yet it may be possible still to adhere to the liberal arts ideal, if we strive for workable compromise, and produce professionals that are more than data-processing machines—as well as arts graduates who are not ignorant of science, technology, and quantitative modes of thought. How might this be brought about? We must first enumerate some of the factors any educative compromise would have to entail.

First, there remain the cultural needs of the individual: in our contemporary culture this means that facts must be known or access to facts understood. There is the need to earn a living: the days of education for a rich élite have thankfully passed, but the most dedicated scholar still must find shelter, clothing, and food—even if, like Chaucer's Student, he would rather buy books than a house. Secondly, there remains the need to fit into society: to understand it, receive its gifts, and rise to a position from which one may address its inadequacies. If such a position enables the individual to pay money to his fellow man to assist him in joint enterprise, the individual transcends his category and becomes that much-abused, much-sought institution, the employer. In contrast, there is the individual's spiritual hunger: now as always, "Man cannot live on bread alone," and the most highly polished professional, if ignorant of beauty and morality, is still sadly incomplete.

Then, in our time, there are the needs of industry. The employer seeks people who are intelligent *and* who know something. These two criteria dovetail. If the employer is worth his salt, and is not content with a human number-cruncher, he will celebrate this ac-

cursed tendency of his employees to attack problems in a different way, rather than grumble about the disruption to standard procedure that such imagination creates. It is conventional wisdom to praise initiative; but in a busy workday, how many of us would truly welcome an employee who came to us with a good idea that would stand our company on its ear? Nonetheless, it is precisely this that is one of the duties of an employer. Similarly, although we may have hired a man or woman for knowledge and even may be willing to support his or her initiative, we must also remain open to other disruptions caused by his or her morality. Traditionally, 'applied psychology' or 'industrial relations' has treated employees as manipulable, interchangeable, and subject to bribery or coercion; yet it remains a fact that we humans can be compelled by idealism as well. There are examples of wartime projects so secret that, say, statisticians dealt only with numbers divorced from any ostensive meaning; simply telling them what they were doing led to tenfold increases in productivity. Industry, then, requires people who know facts and who can take initiatives; but must furnish managers able to put up with and stimulate them.

The technical facet of training is more than ever essential because of the breakneck proliferation of technical knowledge. The sum of what we know may double every decade; there is even evidence that that doubling period may itself be shrinking. The Seven Liberal Arts have now mushroomed into today's seven-times-seven distinct disciplines. Many universities have more than 49 departments, and 490 may not be unthinkable, from bioeconomics to engineering physics; even recent attempts to reconcile differing fields have often led to yet other areas of study. Merely keeping track of the welter of information has spawned some of the most recent new fields such as pro-

gramming, hardware design, systems analysis. There are those who think the technical librarian may be as central a figure to industry of the new age as the engineer is of the old. Again, much of this 'information overload' may be traced back to the same acceleration which destroyed the traditional Seven Liberal Arts. Everywhere are signs that we are running out of time. All our crises—and there seem to be dozens of them—share this trait of urgency: toxic wastes, air pollution, Third World debt rollover, rainforest destruction, do not threaten us at some point in the mythical future: they loom *now*. And there seems as little opportunity to think through any of them, let alone all of them, as there is to ponder Democritus.

Well, we may have reached a limit in the evolution from generalized wisdom to specialized facts—at least in the area of education. There is a time constant in our schools that may be irreducible; and if it is, we may be up against it now. To date, educational institutions have responded to society's demands in exemplary fashion. Are there surveyors needed? We shall scale up our schools of surveying and turn surveyors out by the thousand. Dentists, electricians, biotechnologists? Those too. But as the disciplines involved grow ever more complex, and as the consequences of inadequate or too-hastily-imparted knowledge rise out of sight, the culture as a whole, and especially the business community, might have to accept that pushing the schools to go faster and do more in the absorption of facts may at least be counterproductive. At last, it may be the turn of the universities to make demands upon the rest of society, and inform the latter that the third point you have asked me to mention is beginning to be answered in the negative: there is often now *no* distinction in being a university graduate: the very specialized training received is often not very different from that re-

ceived in the good community college or technical institution.

The Nature of a University

Should there be a distinction? What would it be? There should be, and it derives from the nature of a university. This I have tried to describe in the second of the trilogy of papers that I have been honored to give in Edmonton in the past month. Basically, the purpose of a university is to shelter and foster research. It is a privileged milieu where motivated persons may search out the detailed descriptions of man and the universe and of the interactions between them. For this it came into the world, and over the centuries stretching from beyond Academus and the Lyceum this tradition has steadily enriched knowledge and, as a corollary, the well-being of humanity. This research has attracted those who wish to learn about what is discovered, hence the university's secondary teaching role. Other circumstances have added many secondary roles to its current responsibilities: it is a depository of knowledge, a trainer of professionals, a lieu of cultural activities, a source of service to the community, and so on. But its distinguishing feature is research. Take away research and you have an institution duplicating things that are all done elsewhere. Keep only the research and you have a university still.

Therefore, if graduates of a university have any distinguishing mark, it should be that they have spent some time in the presence of research: understanding its purpose, perceiving its methods, glimpsing some of the future in its results, perhaps participating somewhat, feeling the thrill of the intellectual and spiritual experience that flows from this most human of activities. Such students should perceive the dynamism of human knowledge, the thrust of the currents which are always stirring

the future, the mechanisms of judgement of ideas. They should have learned, in brief, to think, to reason, to express themselves, to sift evidence and opinion, to judge. Ah. We are back to the Seven.

University graduates then, should be distinguished by an understanding of research, and thus be psychologically prepared for change. They will not be automaton data processors, narrow specialists of the gas chromatography of nitrogen, Van der Waals molecules or walking tables of current demographic data, all set to be disconcerted and in need of recy-ling when the company of society in general needs some other expertise. Such graduates will, of course, know many facts, but will be ready discerningly to discard them for new facts, which their judgement will distinguish as *true facts*.

There are many interesting, honorable, useful and necessary educations of which society has need. There are many types of institution to provide them. That which is expected from a university should relate to its contact with research. The others should be confided to other institutions. This is the essence of my comment on your fourth point.

To achieve even partially a better distinction between institutions will be difficult, I know. However, the improvement of all our education programs, to say nothing of their cost-effectiveness, requires a better use of the strengths of all our schools. Currently, secondary education in most of Canada, whether high school or CEGEP, embodies principles set out two and three decades ago following the recognition in North America that our pre-eminence in technical education could no longer go unquestioned. In a sense, our sons and daughters are in a school system created as a response to Sputnik. There, they are supposed to be exposed to all aspects of the scientific method, as well as to languages and the humane disciplines, and emerge under-

standing clearly what science and technology mean to today's world. Let me suggest here that this goal is sometimes but seldom met. We tip our hats to the sometimes, but the seldom must be faced. We have laboratories full of splendid equipment that goes unused or is brought out once a term for a display; facilities capable of original research, in which no such research will ever be done; benches and fan hoods at which a few brilliant minds could thrive and prosper, but which are useless for their stated aim of educating en masse. Is it really too radical to suggest that secondary education spend more on qualified teachers and less on shiny equipment? Science uses instruments, but it is not instruments; it is a set of ideas, and in capable hands these can be imparted with verve, excitement, and considerable force. Note that I said not 'teachers', but 'qualified teachers'; there must be excellence here, or any reforms along this line will surely fail. Seniority must give way to proven competence, a mastery of subject must be the essence, and the discipline of teaching a desirable but associated quality. Only then will we be able to combine the incisiveness associated with the way the Liberal Arts reached the élite, with the universality inherent in education open to all who can absorb it.

Our universities will certainly have to change; but, as I have suggested, this change may be best expressed in a new unwillingness to be accelerated in their educative process: a change towards changelessness. We may see them hand over much of their undergraduate education to a new breed of semi-specialized universities, which would undertake to impart to their students a largely general curriculum split into only a few streams—for example, languages, mathematics, technology, history, arts, science, and philosophy: a new return to Seven. Were this to come about, some universities of today would evolve towards being

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graduate schools, in which students would do original work under the direct supervision of professors, themselves researchers. More of these universities might in turn sub-specialize into producing mostly or only one profession: engineers or economists, or anything else after the fashion of some great schools. Their graduates, however, would have been inoculated against a blinkered overspecialization by having first been graduates of the semi-specialized schools, at which they would be thoroughly exposed to values and outlooks that were the direct descendants of the original Liberal Arts. In this way our young people could perhaps be trained as desirable employees, yet be polished citizens as well. It is an ancient goal, worth reconsidering.

I would now summarize the views which I have expressed on the four points which you wished to consider. First, the basic tenets of a university education would still seem to be those of the Liberal Arts course, as envisaged so long ago, but adapted to the 21st century: this should produce the thinking, critical person, cognizant of where society is going and armed with a balanced set of facts and techniques, a person for the Information Age. Second, it is true that university curricula have evolved from instilling wisdom to teaching facts. There are so many facts that the Seven have become Seven times Seven, and threaten to become Seventy times Seven. Thirdly, there is today diminishing distinction in being a university graduate, by reason of the Seventy times Seven and the evolution of other institutions carrying out similar work. This is all a matter for the universities to work out, and will take at least a generation. Fourthly, the university graduate should have been educated in an atmosphere of research, which is the *raison d'être* of the university. This should characterize the university man and woman and make them suitable for

special needs of society.

The Task for Business

Meanwhile, business must find ways to increase its sense of productivity and also prepare for constantly renewing its initiatives and techniques. This requires personnel of a highly adaptive and cooperative kind. The training they receive is crucial to this. Many groups are lobbying for changes in the educational systems of Canada, and there is no reason why business should not lobby as well. Here are a few points which it might consider:

Pressing for a simplified but more rigorous Elementary system in which the techniques of communication and mathematics are stressed (not forgetting reading, writing and arithmetic).

Pressing for a 'High School system in which three questions are addressed: the development of the elementary base, the qualities of the citizen, and one of a small number of options.

Pressing for a trade school system in which the proliferation of trades is reversed, and more general-purpose tradespeople trained, making them more easily adaptable to the rapidly changing needs of society.

Pressing for University reform which will reduce the number of specializations and train all students in a research atmosphere, improving in this way both adaptability and innovative bent.

Pressing for Graduate training which is based on participation in research which is carried on more and more in collaboration with industry.

Pressing for more formal recognition of the numerous courses being generated by business and industry to train new employees for specific responsibilities.

Such pressing will require much thought and preparation, and may result in business deciding on quite different desiderata for its recruiting. It

will require close collaboration with the universities, subject to many other pressures. The whole national exercise will take many years, before slight modifications here and there gradually effect a change in the way we train our people for the new age upon which we are entering.

In any case, it seems beyond doubt to me that some such reorganization of existing institutions, and existing attitudes must begin soon. Without such new design, our products—that is, our graduates of schools and universities—will prove increasingly unmarketable in a world where competition extends beyond individuals, or even firms, to whole blocs of nations.

Several centuries ago, the world was populated by myriads of specialized craftsmen and guildsmen catering to the needs of society. Then came the Renaissance, with its explosion of knowledge in both old and new areas—including the beginnings of modern science and technology. The proliferation of specialists might have been equally explosive, and of course stultifying. The idea of the Seven Liberal Arts came as an elegant solution, coordinating and simplifying the educational system by teaching wisdom rather than facts; reasoning rather than recipes. The system provided leaders for the new society for centuries, down to the time of our fathers.

We are now faced with an analogous problem, as a new explosion of knowledge and our haste to have somebody know something about everything is pushing us once again to the system of seventy times seven specialists.

I have profound faith that we shall recognize that it is time for a new synthesis. Once again, faced with a global educational crisis, we shall choose Wisdom. *□

* Copies of Dr. Kerwin's "Trilogy" are available from the Office of Community Relations.

Turn on the Light Bulb

The CBC is looking to Canadian universities for IDEAS.

IDEAS is a national information and opinion program heard weeknights on CBC Stereo. Each week about 100,000 listeners tune in to the documentary-style program, which covers subjects in the sciences, humanities, social sciences, and the arts.

Conceived in 1966, the program has always relied on both academics and journalists for its content. Until now, however, journalists have been

responsible for most of the shows. The CBC would like to change that.

A special effort is being made to shift the balance back to the academics, who constitute a relatively untapped source.

"We often have to go abroad for expert opinions when in fact there are people on home ground equally capable but unknown to us," says IDEAS Executive Producer Geraldine Sherman.

She and her staff would like interested academics not

only to submit program proposals, but to conduct the interviews, shape the material and finally script and narrate the series they have put together. Professional producers would help in the process.

"What we provide is something like a crash course in radio communication," explains Sherman. "We teach people how to make radio shows and they teach us what they've been doing for a lifetime."

Production of a series, from proposal to broadcast date, can take anywhere from two to six months but contributors, who work on a part-time basis, do get paid for their labours. The broadcasting experience gained is a bonus.

Some examples of recent shows are: a three-part series on

the history of the spy novel by David Stafford, Associate Professor of History at the University of Victoria; a four-part series on ethics in genetics, business, sexuality and medicine by University of Guelph philosopher Michael Ruse; and a four-part series on the roots of disunity in Canada by David Bell, Dean of Graduate Studies at York University.

Those interested in submitting a proposal should talk to Geraldine Sherman, Executive Producer, IDEAS CBC, P.O. Box 500, Toronto, Ontario M5W 1E6 (416-925-3311, extension 2084). *□

* This article was drawn from the May 1983 issue of University Affairs.

Alumni Association Accepting Nominations for Golden Jubilee Award

Each year, this University's Alumni Association presents the Alumni Golden Jubilee Award to an individual who has made a significant contribution to the University. That individual need not necessarily be a graduate of the University.

Nominations are now being accepted for the 1983 Alumni Golden Jubilee Award. It will be presented at Fall Convocation 1983, to be held on 19 November.

Nominations should be made in writing and addressed to: Alumni Golden Jubilee Award, Office of Alumni Affairs, 430 Athabasca Hall, The University of Alberta, Edmonton, Alberta T6G 2E8.

The deadline for nominations is 30 May 1983. (All nominations must be received on or prior to that date.) □

Physical Education Issues SOS

The Faculty of Physical Education and Recreation is looking for a better method of booking squash and racquetball courts. The current system, based on a first-come first-served basis, has been the only system tried over the last few years that appears to be the fairest to the majority of users. The major drawback is the amount of time wasted waiting in line, particularly if you eventually find that the time slot you wanted has already been reserved.

Can you think of a better method which (a) gives all legitimate users an equal chance at booking; (b) is not expensive; and (c) allows maximum usage?

If you can come up with a solution, please write to the Assistant to the Dean, E-469 Physical Education and Recreation Centre, or discuss it with the Equipment Room staff.

Readers are asked to remember that locker changes noted in the 10 March edition of *Folio* are occurring. □

Full Day of Criminology Planned

One of the University's 75th Anniversary events dictates that crime is of the essence. The Centre for Criminological Research and the Department of Sociology, sponsors of the 6 May Criminology Symposium in Honor of Gwynn Nettler, will call on nine criminologists to deliver papers in 1-60 Chemistry East. (The symposium has been moved from 231 Law Centre because pre-registration was so heavy.)

At 9:15 a.m., William R. Avison, University of Western Ontario, will speak on "Liberalism and Criminology." The remainder of the morning's (you should pardon the word) line-up is as follows: Leslie Wilkins, Avon, England, "International Criminal Statistics: A Social Indicator's Approach," 9:45 to 10:15 a.m.; Travis Hirschi, University of Arizona, "Utility Tests of Crime Theory," 10:30 to 11 a.m.; John Hagan, University of Toronto, "The Unexplained Crimes

of Class and Gender," 11 to 11:30 a.m.

Post-luncheon speakers and their topics are: Robert A. Gordon, Johns Hopkins University, "Extending the Race-I.Q.-Delinquency Model to Other Races, Violence and Adults," 1:30 to 2 p.m.; A. Ronald Gillis, University of Toronto, "Domesticity, Divorce and Deadly Quarrels," 2 to 2:30 p.m.; H. Laurence Ross, State University of New York at Buffalo, "Implications for Deterrence Theory of Studies of Drinking-Driving Laws," 2:45 to 3:15 p.m.; Leonard D. Savitz, Temple University, "Obscene Phone Calls," 3:15 to 3:45 p.m.; and Jackson Toby, Rutgers University, "The Victims of School Crimes," 3:45 to 4:15 p.m.

Dr. Nettler, Professor Emeritus of Sociology, will be leaving the University after twenty years of distinguished service. He is the author of *Explaining Crime* and the four-volume *Criminal Careers*. □

'35 and Over' Hockey: A Winner

The Faculty of Physical Education and Recreation ran an experiment this past term and the results were most gratifying. The Campus Recreation Program (a wing of the Department of Athletic Services and the Faculty) set up a Wednesday night hockey league from January until the end of March for the "geriatric set" on campus. More specifically, those people on faculty and staff and those students who are 35 or over were able to get out to

Varsity Arena once a week and match hockey skills with people of their own calibre and fitness level.

Four teams bearing the unlikely names of Stone Angels, Methusalahs, Golden Oldies, and Precambrians lit up the scoreboard.

The Golden Oldies and the Methusalahs were two teams put together as a result of individuals coming out to a pre-league skating and shooting practice.

The Stone Angels were basically a group of fellows from the Arts Faculty who toiled tirelessly under their mentor, Rod McLeod from the History Department. He put together a motley team that featured Terry White, Dean of Arts, stopping rubber "between the pipes."

The Precambrians (you guessed it—the team from Geol-

ogy) were led by that grey-haired smoothie, Jack Lerbekmo. His team started a couple of weeks late but made up for it with some fantastic displays of unparalleled aerobic capacity.

Some fifty-five people participated in this year's edition of the 35 and over hockey league which was a "no hit" league.

After the dust had settled the final standings were as follows: 1st, Stone Angels (Arts), 12 points; 2nd, Methusalahs, 9 points; 3rd Precambrians (Geology), 7 points; 4th, Golden Oldies, 2 points.

Support and encouragement of the league was extended by the Dean of Physical Education and Recreation, Gerry Glassford, and the

Chairman of Athletic Services, Garry Smith. A post-season evaluation by the participants revealed an overwhelmingly positive reaction to the league. Comments like, "It was a great chance to meet fellow U of A employees" and "The recreational emphasis was good" were particularly gratifying to the organizers. Probably the most interesting comment was "I'm not as old as I thought I was!"

Come September, be sure to check with the Campus Recreation Program. 35 and over hockey is where it's at—at least for some people.*□

*The foregoing was excerpted from an article contributed by Hugh Hoyles of Athletic Services.

Collectives

- A pile of nuclear physicists
- A grid of electrical engineers
- A set of pure mathematicians
- A field of theoretical physicists
- An amalgamation of metallurgists
- A line of spectroscopists
- A coagulation of colloid chemists
- A galaxy of cosmologists
- A cloud of theoretical meteorologists
- A shower of applied meteorologists
- A litter of geneticists
- A knot of nautical engineers
- A labyrinth of communication engineers
- An exhibition of Nobel prize winners
- An intrigue of council members
- A dissonance of faculty members
- A stack of librarians
- A chain of security officers
- A complex of psychologists
- A wing of ornithologists
- A batch of fermentation chemists
- A colony of bacteriologists
- A plague of doctors
- A herd of audiologists.*□

*Extracted from an bulletin of current documentation which cited the University of Canterbury, New Zealand Chronicle, 11 June 1982, as its source.

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Universiade Medallion Memo

There's something of the collector in at least 150 individuals on campus and the University Protocol Office would like to see the figure raised to 300. W.A.D. (Doug) Burns, University Protocol Commissioner, recently told *Folio* that his Office hopes to sell 300 Benefactor Medallions. The exclusive silver-plated octagonal medallions enable purchasers to become supporters of the 1983 World University Games.

Each medallion is in a presentation case and sells for \$20. Sales are limited to University staff and students, federal and provincial government and City of Edmonton employees, and members of AUPE.

Medallions can be purchased at the University Protocol Office, 3-31 University Hall, telephone 432-5660.□

Opportunity for Opinion Pieces

If you are anxious to burst into print, *University Affairs* may be the medium for your polished prose. The May 1983 issue of the magazine says that it plans to publish on a regular basis opinion pieces written expressly for it on various aspects of the role/activities of the university. The idea for this series came while searching for a special feature to celebrate National Universities Week (2 to 8 October 1983).

Future articles (*University Affairs* is published on or about the 15th of each month except May and July) will appear on the back cover. (An article planned for this month was pre-empted by the new NUW logo and signature phrase.)

University Affairs is put out by the Association of Universities and Colleges of Canada, 151 Slater Street, Ottawa, Ontario K1P 5N1.□

University Press Clicks With Sunfield Painter

Sunfield Painter: The Reminiscences of John Davenall Turner, published last fall by the University of Alberta Press, has won the First Writers' Guild of Alberta Award for Nonfiction.

The award was presented to Grace Turner at the Writers'

Guild Award Dinner on 30 April at St. Joseph's College on campus.

Copies of *Sunfield Painter* (\$24.95) are available from the University of Alberta Press, 450 Athabasca Hall, telephone 432-3662, or from Alberta bookstores.□

Neurochemical Research: "You Are What You Eat"

The scene? The corner grocery store. The players? An average looking couple, standing at the cheese counter, perusing the products available. Wanting to buy some old cheddar, they are stumped by the wide variety of brands available. "Hurry up and pick one," she urges. "They're all the same."

But are they? Likely not, according to Ron Coutts, Professor and Assistant Dean of Pharmacy and Pharmaceutical Sciences. And the differences from brand to brand may well be playing a hitherto undetected role in the mental health of many Canadians.

Dr. Coutts is Co-Director of the Neurochemical Research Unit (NRU), a joint research effort of the University's Faculty of Medicine (Department of Psychiatry) and Faculty of Pharmacy and Pharmaceutical Sciences. The interdisciplinary unit was established in order to study neurochemical factors involved in the cause and treatment of psychiatric disorders.

An important part of the NRU's research is a study being undertaken by Dr. Coutts and two colleagues, Glen Baker, Associate Professor of Psychiatry, and Franco Pasutto, Assistant Professor of Pharmacy and Pharmaceutical Sciences. They are currently involved in a major research thrust designed to delve into the presence and effects of biologically active amines in food.

Amines are compounds produced naturally in the brain. Many are also found in a variety of foods such as cheese and chocolate. The very presence of some of these active amines appears to affect neurotransmission in the brain, according to Dr. Baker. In other cases, it may be abnormal levels of amines in the central nervous system that produce some of the symptoms of such conditions as depression, anxiety, and migraine headaches.

The problem, explains Dr. Baker, is that while research has borne out the existence of these amines in foods, there is no comprehensive, quantitative list of the amines that are present in commonly used food products. "A lot of the work that has been done has been qualitative, not quantitative," explains Dr. Baker. "We have some idea of what amines are present, but not of the absolute amounts." While there are many studies related to the contribution that amines and their precursors, amino acids, make to neurological activity in the brain, lack of extensive quantitative data makes it difficult for research to go forward as it should.

The current thrust of the NRU, therefore, is to produce a simultaneous, quantitative analysis of a number of biologically active amines in a variety of popular food products. Using a method called gas chromatography with electron-capture detection (GC-ECD), the Unit is carrying out a comprehensive study which looks at the levels of both amines and amino acids in certain foods, beginning with cheese and chocolate products.

GC-ECD analyses the compounds available in foodstuffs. Using a carrier gas, the compounds are forced along a heated column, separated, and subsequently measured. "There are hundreds of compounds in the brain," says Dr. Coutts, "some present in much larger quantities than others. So it is important to separate them as finely as possible." The process is a complicated one, but one that appears to have solved some of the problems previously encountered in the analysis of foodstuffs (for example, incomplete extraction, low sensitivity, and inability to completely resolve components).

"It's important to point out that we are really doing more

than just a quantitative study," states Dr. Pasutto. Many other tests are not specific enough to differentiate between components, he explains, and while it is very important to measure the components quantitatively, it is just as important "to be sure that we are measuring the right ones."

While the list will begin with an analysis of cheese and chocolate products, it is not limited to these; it will expand, as time and funding permit, to include other foods as well. Nor is it limited to different types of foods. In fact, points out Dr. Pasutto, one of the most important aspects of the research is the analysis of different brands of the same food. Amine levels in cheddar cheese, for example, vary greatly from brand to brand because of the differences in the fermentation process used to make the cheese. (The levels may also vary from batch to batch within the same brand, for the same reasons.)

What will the NRU team do with the results? They anticipate that the list, once com-

pleted, will be an aid to health professionals counselling patients in certain disease states or in drug therapy programs where such amines may be a problem. Further, the list will be of help to toxicologists and researchers in nutrition, in neurosciences, and in agriculture.

In addition to compiling the list, the NRU team plans to study the effects of a variety of doses of amines on brain function in rats. They will also investigate the effects of the ingestion of cheese and chocolate (containing known amounts of amines and amino acids) on the urinary excretion of amines in human subjects.

"Our mandate is to report our findings to Health and Welfare Canada, the funding source for this NRU project," sums up Dr. Coutts. "We will carry out the research and make others aware of the situation. After that, it's up to others to act on the findings."*

* This article is reprinted from Research Reporter (Spring 1983).

New Undergraduate Awards in Secondary Education

The Department of Secondary Education is pleased to learn of two new undergraduate awards which will be made annually to outstanding students as a result of endowments made to the University. The awards are: The Guy and Vanna Tessier Awards in Secondary Education and The Michele Nubuko Aoki Secondary Education Award.

In the first instance two awards of \$300 each will be presented to graduating students who show outstanding potential to contribute to secondary education teaching in Alberta. The donors are Guy

and Vanna Tessier of Edmonton. Mr. Tessier is a former secondary school teacher with the Edmonton Catholic School Board.

The Michele Nubuko Aoki Award, valued at \$800, will be made to the senior undergraduate student showing outstanding potential to contribute to the improvement of biology teaching in secondary schools. The donors are Dr. and Mrs. Ted Aoki and family, who have made the donation in memory of their daughter, Michele. Dr. Aoki is the Chairman of the Department of Secondary Education. □

Canadian Institute of Ukrainian Studies Increasingly Active in Publishing Domain

During the 1982-83 academic year, the Canadian Institute of Ukrainian Studies (CIUS) considerably expanded its publications program. In this period, six major works—two in history, two in the social sciences and two on Ukrainians in Canada—and three research reports were published.

In September, CIUS brought out John Basarab, *Per-eiaslav 1654: A Historical Study*, a monograph on the 1654 treaty between Ukraine and Russia, long a subject of controversy among historians. The volume's sober assessment details the interpretations to date. The book was Dr. Basarab's doctoral study

for the American University in Washington, D.C.

One of CIUS' more ambitious projects is the *Selected Works of Bsevolod Holubnychy: Soviet Regional Economics*, a volume intended as a tribute to a foremost authority on the subject. Dr. Holubnychy was associated with the Institute for the Study of the USSR in Munich from 1954 to 1959 and taught at Hunter College, New York, from the early 1960s onward. He died in 1977. The volume contains nine of his essays, of which three are published for the first time: "V. V. Novozhilov's Theory of Value" (his doctoral thesis), "The 1917 Agrarian Revolution

in Ukraine" and "Marxography and Marxology: What Is Known About Marx?" The other essays fall into three main categories: Studies on Ukrainian Social and Political History, Studies on Regional Development in the USSR, and Studies in Marxism. The publication of the essays on economics involved the long and painstaking typesetting of various formulae for the first time (undertaken by CIUS' Publications Assistant, Peter Matilainen). *Soviet Regional Economics* contains an introduction by Holubnychy's longtime friend and fellow economist, Iwan S. Koropecyk of Temple University, Philadelphia, and a bibliography of Holubnychy's works by Osyp Danko of Yale University.

CIUS has become an important publisher of works about Ukrainians in Canada which form part of the series "The Alberta Library in Ukrainian Canadian Studies." The two most recent additions to this collection are *Loyalties in Conflict: Ukrainians in Canada During the Great War*, edited by Frances Swyripa and John Herd Thompson, and *Litopys ukrainskoho zhyttia v Kanada* (The Annals of Ukrainian Life in Canada), volume 6, compiled by Ol'ha Woycenko. The first book contains essays originally presented at a conference, sponsored by CIUS, and held at The University of Alberta in 1980. One of its key aspects concerns the internment and disenfranchisement of Ukrainians as enemy aliens during the First World War. Other topics covered include Ukrainian Canadians and the wartime economy, aliens in Britain and the Empire during the First World War, the Ukrainian Canadian response to the Paris Peace Conference, and Ukrainian diplomatic representation in Canada from 1920

to 1923. The contributors are D.H. Avery, O.W. Gerus, N.O.M. Kazymyrya, A. Makuch, P. Melnycky, D. Saunders, F. Swyripa and J.H. Thompson.

The publication by Woycenko is the sixth in a series, begun by Trident Press of Winnipeg in 1961, that indexes chronologically and by subject the weekly newspaper *Ukrainskyi holos* (Ukrainian Voice), first published in Winnipeg in 1910. The sixth volume encompasses Ukrainian Canadian developments during the 1950s. Mrs. Woycenko is author of *The Ukrainians in Canada* (1967).

In April, CIUS published *The Communist Party of Western Ukraine 1919-1929* by Janusz Radziejewski of the Institute of Scientific Policy in Warsaw, who was CIUS' visiting professor in 1979-80. The volume, based on Dr. Radziejewski's doctoral dissertation, was originally published in Cracow in 1976. The English translation was prepared by Alan Rutkowski of The University of Alberta. The book has claims to be the definitive work on the Communist Party of Western Ukraine. In analysing the conflicts between communism and nationalism among Ukrainians in Polish-ruled Ukraine during the interwar period, the author pays particular attention to the CPWU's relations with the Communist Party of Poland and the Communist Party (Bolsheviks) of Ukraine in the years 1924 to 1928.

In June, CIUS will publish *Ukraine After Shelest*, edited by Bohdan Krawchenko, CIUS Research Associate. It contains five essays originally presented at a panel on contemporary Ukraine, sponsored by CIUS, the Canadian Association of Slavists and the Canadian Politi-

An exciting travel opportunity

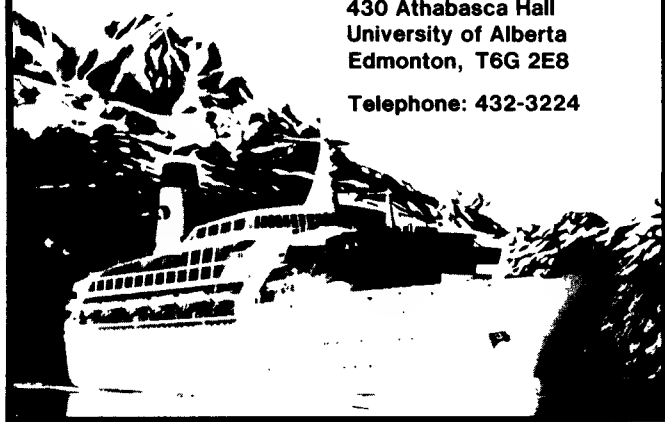
The Alumni Association of the University of Alberta is sponsoring cruises to the scenic grandeur of **Alaska and the Inside Passage** and to the exciting **Mexican Riviera** as part of its 1983 *Call of the Sea* travel program.

Through this program, alumni and others from the University community will be able to enjoy all of the luxury which the fabulous Princess Fleet has to offer at significant savings.

For further information,

**Office of Alumni Affairs
430 Athabasca Hall
University of Alberta
Edmonton, T6G 2E8**

Telephone: 432-3224



cal Science Association, organized during the May 1981 Learned Societies Conference at Dalhousie University, Halifax. The essays focus on the period after the fall of Petro Shel-est, first secretary of the Communist Party of Ukraine, 1963 to 1972. Concerned to reverse developments during a period of rising social unrest, cultural turmoil and national assertiveness in Ukraine, the Soviet authorities charged Volodymyr Shcherbytsky, the new first secretary of the CPU, with the task of returning Ukraine to its formerly subservient position within the Soviet hierarchy. The essays highlight the successes and failures of Shcherbytsky's mission. The contributors to the book are B. Krawchenko, B. Nahaylo, G. Ozornoy, M. Shkandrij and R. Solchanyk.

The research reports include *Film and the Ukrainians in Canada, 1921-1980*, an annotated index of film titles by Shirley Zaporzan and Robert B. Klymasz; *Political Refugees and "Displaced Persons" 1945-1954*, a detailed bibliography and guide by Yuri Boshyk and Boris Balan to archival repositories, visual materials, sound recordings, inter-governmental and national and military government publications, and publications by Ukrainian refugees and "displaced persons," originally conceived as a guide for researchers who will participate in a conference on the theme at the University of Toronto, 3 to 6 November 1983; and *Ukrainian Serials: A Checklist of Ukrainian Journals, Periodicals and Newspapers in the University of Alberta Library*, compiled by Alan Rutkowski and Nadia Cyncar as a guide to more than 400 serials.

CIUS Publications 1982-83
Basarab, John. *Pereiaslav 1654: A Historiographical Study*, xxvii, 322pp. Cloth \$19.95

Koropeckyj, Iwan S. ed. *Soviet Regional Economics: Selected Works of Ysevolod Holubnychy*, xvii, 561pp. Cloth \$24.95

Krawchenko, Bohdan, ed. *Ukraine After Shelest*. Paper \$7.95
Radziejowski, Janusz. *The Communist Party of Western Ukraine 1919-1929*, xvi, 224pp. Cloth \$14.95 Paper \$9.95
Swyripa, Frances and John Herd Thompson, eds. *Loyalties in Conflict: Ukrainians in Canada During the Great War*, ix, 214pp. Paper \$7.95
Woycenko, Ol'ha. *Litopys ukrainskoho zhyttia v Kanadi* (The Annals of Ukrainian Life in Canada), vol. 6, xii, 416pp.

Cloth \$14.95
Available from: The University of Toronto Press, Distribution Department, 5201 Dufferin Street, Downsview, Ontario, M3H 5T8.
Boshyk, Yury, and Boris Balan. *Political Refugees and Displaced Persons, 1945-54*, xlv, 424pp., Research Report No. 2 Paper \$10
Rutkowski, Alan and Nadia Cyncar, compilers. *Ukrainian Serials: A Checklist of Ukrainian Journals, Periodicals and Newspapers in the Uni-*

versity of Alberta Library, vi, 62pp., Research Report No. 3 Paper \$3
Zaporzan, Shirley and Robert B. Klymasz. *Film and the Ukrainians in Canada, 1921-1980* (Additional entries by Jars Balan), xi, 76pp., Research Report No. 1 Paper \$5
Available from: Canadian Institute of Ukrainian Studies, 352 Athabasca Hall, The University of Alberta, Edmonton, Alberta, T6G 2E8. □

Fast-and-Feast Diet Helps Combat Jet Lag

In the past two decades, jet lag has become a common discomfort. Business people on the go just learn to live with the inevitable insomnia, general disorientation, and sometimes indigestion, that come from flying through several time zones.

Now a diet has been developed at the Argonne National Laboratory in the United States which, if it does not prevent the malfunction, speeds up recovery. Put simply, travellers should feast and fast four days before they take off, or at least fast the last twenty-four hours, says its inventor, Charles Ehret. The intake of carbohydrates and calories should be kept to a minimum, say 700.

On fast days, meals might include light soups, broths, skimpy salads, unbuttered toast, half slices of bread, and fruit.

"This helps to deplete the liver's store of carbohydrates," Dr. Ehret says. "We do not fully understand the reasons but it speeds the shift to a new time zone."

Carbohydrates help the body produce sleep-inducing chemicals so suppers on feast days might include macaroni or spaghetti (but no meatballs), pancakes, potatoes, starchy vegetables, and sweet desserts.

High Protein

Protein activates the body. Thus breakfasts and lunches are high in such foods as steak, ham-

burgers, eggs, high-protein cereals, and green beans.

Caffeine plays a role, too. When feasting or fasting, coffee (or tea) is only drunk in the afternoon, the one time when caffeine has no effect on body rhythm.

On board the plane, it is used to help reset the body clock. Ta-

king an eastbound evening flight to London, travellers should fast during the day and on board eat a light, low-carbohydrate supper and avoid alcohol.

Then from 9 to 10 p.m. they should drink a lot of coffee and try to sleep. Three or four hours later—when Londoners are breakfasting—the caffeine

Co-ordinator

Committee for the Improvement of Teaching and Learning

The University of Alberta requires a co-ordinator for the Committee for the Improvement of Teaching and Learning. Amongst the responsibilities of the incumbent will be the setting up of a human resources and audio-visual resources file relating to the improvement of university teaching and its evaluation, the organization of workshops and seminars, and possibly the co-ordination of a system of individual consultation for improving teaching. The salary for an initial eleven month appointment will be \$19,000, commencing July 1, 1983.

Applicants ideally should possess a higher degree in an academic field, and have some experience teaching in a post-secondary institution.

Applications, with a curriculum vitae and three letters of reference, should be addressed to Dr. J. Hoddinott, C.I.T.L., Department of Botany, University of Alberta, Edmonton, Alberta, T6G 2E9, and be received by May 16, 1983.

The University of Alberta is an equal opportunity employer, but in accordance with Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

probably will wake them, at which time they eat a high-protein meal, without coffee.

They stay on the new time—reading, working, walking around—and in London have a feast day: high-protein lunch, high-carbohydrate supper and go to bed early.

For more information, send a self-addressed, stamped (U.S.

letters take US \$0.20) envelope to Office of Public Affairs, Argonne National Laboratory, 9700 Cass Ave., Argonne, Ill., 60439.*□

*The preceding article was reprinted from The Financial Post (16 April 1983).

and Planning.

Funding for *A History* came from the University/Community Special Projects category of the University's Endowment Fund for the Future.

Anyone interested in receiving a free copy of the special 75th anniversary project need only contact the Department of Economics, 8-14 Tory, telephone 432-3406.□

service information

All information to be included in this column must reach the Office of Community Relations by 9 a.m. the Thursday prior to publication.

Cooperative Educational Project Advances

As a further step in the development of a cooperative educational project with the University of Dar-es-Salaam, three members of the Faculty of Education, University of Alberta, and one from the University of Calgary visited Tanzania under the auspices of the Centre for International Education and Development (CIED) and with funding from CIDA. The team consisted of M.K. Bacchus, Director of CIED; G. Kysela, Professor of Educational Psychology; K. Jacknicke, Professor of Curriculum Studies; and Robert Lawson, Dean of the Faculty of Education, University of Calgary.

This was a return visit—two professors from the University of Dar-es-Salaam had visited The University of Alberta in con-

nection with the project last October—and the main objective was to finalize proposals for a cooperative project between the two universities.

The team spent just over two weeks in Tanzania visiting all types of schools and educational institutions. They then worked out with the faculty of the Department of Education, University of Dar-es-Salaam, the details of the proposed joint project which will soon be submitted to the Faculty of Education for approval and to CIDA and IDRC for funding. If the project is approved, it is hoped that it will be on the way by January 1984.□

people

Stancil Campbell (Drama) designed the scenery (three full sets and the magical carriage) and lighting for the Alberta Ballet's recent production of "Cinderella."

Albert A. Einsiedel, Jr. (Local Government Studies, Extension) has received an Imperial Oil Ltd. research grant for a project entitled "An Assessment of the 'Technology Gap': A Longitudinal Study." This three-year study will assess the scientific and technological literacy gap between various groups of people, with respect to selected issues relevant to productivity and the quality of life.

Myer Horowitz (President) was rather active as an eloquentist last month. For example, on 14 April he discussed "The University in the 1980s" at the M.E. LaZerte Chapter of the Canadian College of Teachers. The following day, he attended a meeting of the Edmonton Friars' Club and spoke on "The University in Its 75th Anniversary Year." On the 19th, the topic was "The Challenge to Universities" and the listeners were delegates to the Conference on the Business Community and the University. Dr. Horowitz also addressed graduates of Grant MacEwan Community College on 23 April.

Coming Events

Lectures and Seminars

Seminar on International Development

6 May, 8:30 a.m. to 4:30 p.m. The President's Committee on International Development will hold its third annual seminar "International Development and the University." Register for the seminar prior to 29 April. For more details, contact Merril McDonald at 432-3035.

Faculty Women's Club

8 May, 11:30 a.m. A Champagne Brunch will take place in the lounge of the University Pavilion. Members of the faculty and friends are cordially invited to attend. This event will offer an opportunity to see part of the facilities to be used for the World University Games. Tickets are \$10 each and may be obtained from Interest Group Convenors or by contacting Vi Moskaluk at 435-6922 or Margaret Dossetor at 433-1630.

Alberta Heritage Foundation for Medical Research

9 May, 4 p.m. H. Gutfreund, FRS, University of Bristol, Medical School, will speak on "The Development of Rapid Reaction Techniques and Their Application to the Study of Enzymes and Other Proteins." 2-27 Medical Sciences Building

11 May, 4 p.m. Dr. Gutfreund will present a lecture entitled "The Kinetic Analysis of ATP Hydrolysis and Actin-Myosin Interaction During Muscle Contraction." Lectures are being hosted by the Department of Biochemistry. 2-27 Medical Sciences Building.

Departments of Biochemistry and Immunology

10 May, 4 p.m. David Webb, Roche Institute of Molecular Biology, Nutley, New Jersey, will speak on "Biochemical Analysis of Antigen-Specific Monoclonal Suppressor Factors." 2-27 Medical Sciences Building.

Department of Immunology

11 May, 11 a.m. Shizuko Muraoka, Division of Biological Research, Ontario Cancer Institute, will present a seminar entitled, "The Role of Anti-Self Suppressor Cells

History of Economics Department Available

What is black and white and (soon to be) read all over? *The Department of Economics, The University of Alberta: a History*, by Eric J. Hanson, Professor Emeritus of Economics. Now available free of charge, the book is a tribute to both the Department of Economics and the University during its 75th anniversary year.

Tracing the development of Economics from its earliest days as part of History and Political Economy, *A History*

highlights some of the founding members of the department, its changing goals, and its relationship within the University community.

Brian Scarfe, Chairman of Economics, credits Dr. Hanson for the ambitious project that he undertook. Dr. Hanson passes much of that credit on to Jim Parker and the staff of the University Archives as well as to the Office of the Registrar, the Alumni Office, and the Office of Institutional Research

in the Development of Cytotoxic T Lymphocytes." Dr. Muraoka's specialty is control of self-antigen recognition in the ontogenic development of lymphocytes. This speaker is being sponsored by The Alberta Heritage Foundation for Medical Research. 8-66 Medical Sciences Building.

Children's Literature Association Conference

13 to 15 May. The theme of the conference is "Frontiers in Children's Literature," with keynote addresses by Alan Garner, Virginia Hamilton, James Houston, and Charles Keeping. For more information, phone Jon Stott at 432-4611.

Department of Anatomy

12 May, 4 p.m. Russel J. Reiter, University of Texas Health Science Center, San Antonio, will speak on "The Mammalian Pineal Gland: Structure and Function." 5-28 Medical Sciences Building.

16 May, 4 p.m. Mr. Reiter will present a lecture entitled "The Importance of the Pineal Gland in Clinical Medicine." Both lectures are being sponsored by The Alberta Heritage Foundation for Medical Research. 5-28 Medical Sciences Building.

International Conference on Advances in Scintillation Counting

15 to 18 May. The conference, to be held at the Banff Centre, will consider such topics as liquid scintillation counting, gamma scintillation counting, single photon counting, low level counting, and economic and environmental aspects of these techniques. Further information and registration forms may be obtained from C. Ediss at 432-5304 or S. McQuarrie at 432-2905.

Music

Department of Music

6 May, 8 p.m. George Sakellariou, internationally known guitarist. Concert presented in cooperation with the Classical Guitar Society of Edmonton. Convocation Hall. Tickets \$10 available at BASS outlets and at the door.

Exhibitions

Until 29 May. "Autobiography." An exhibition of photoworks by Terry Atkins and Erich Ranft, which includes room installations of photoworks ranging from wall presentations and assemblages to folios and bookworks.

Until 31 May. Books of the Renaissance. The Bruce Peel Special Collections Room, B-37 Cameron Library.

75th Anniversary Events

7 May, 10 a.m. to 3 p.m. Preview of the Universiade Pavilion. Everyone welcome.

Radio and Television

Television

Programs broadcast on Q-9 and C-13.

9 May, 9 p.m. Parasites in Moose—"A look at the parasites that adapt themselves to Moose."

11 May, 9 p.m. Faculty Profiles—"Faculté Saint-Jean."

14 May, 9 p.m. Faculty Profiles—"Faculté Saint-Jean."

SUB Theatre

7 May, 7 p.m. Casey's Dance Centre is holding its "Year End Recital." Tickets are available from Marie Casey at 463-2105.

11 May, 7:30 p.m. The Celebration of Women in the Arts Music Gala. The evening will feature Alberta artists and the New York folk singer Odetta.

12 to 14 May. "Omnibus"—Montreal Mime Troupe.

Studio Theatre

Until 7 May, 8 p.m. Sam Shepard's "Buried Child," winner of the 1979 Pulitzer Prize.

Non-Credit Courses

Computing Services

Client Training Sessions

Computing Services is taking registrations between 8:30 a.m. and noon for the following non-credit courses. Please phone 432-2261 first to confirm the dates. Payment is required in advance and clients who do not cancel two business days in advance will be charged. Contact Carey, Training Assistant, at 432-2261 or in 323 General Services Building, for more information.

AJ510 Operation and Visual Editing

Course number: 1027. Date: 16, 18 May. Time: 11 a.m. to 1 p.m. Fee: \$15. Prerequisites: "MTS and Editor Fundamentals" and a good working knowledge of the File Editor. Place: 357 GSB.

Introduction to Text Formatting

Course number: 1045. Date: 2, 4, 6, 9, 11 13 May. Time: noon to 2 p.m. Fee: \$25. Prerequisites: "MTS and Editor Fundamentals," "MTS Overview," and a good working knowledge of the File Editor. Place: 315/351 GSB.

Introduction to SPIRES

Course number: 1059. Date: 25, 27 May. Time: 1 to 4 p.m. Fee: \$15. Prerequisites: "MTS and Editor Fundamentals" and a good working knowledge of file editing and terminal use. Place: 315/351 GSB.

MTS Overview

Course number: 1036. Date: 9, 11 May. Time: 2 to 4 p.m. Fee: \$15. Prerequisites: "MTS and Editor Fundamentals." Place: 315/357 GSB.

MTS and File Editing Concepts

Course number: 1055. Date: 17, 19 May. Time: 10 a.m. to noon. Fee: \$15. Prerequisites: None. Place: 351 GSB.

Faculty of Extension

Business, Industrial and Professional Division

For further information on the course listed below, call 432-5066 or 432-5067. Effective Interviewing Techniques

Applied Behavioral Sciences Division

For further information on the courses listed below, call 432-5069. Team Management Skills in Health, Education, and Social Services Assertion and Interpersonal Skills Training for Professionals—Level I Assessing Program Effectiveness Managing Time Seminar—Section B

Urban and Rural Planning

For further information on the course listed below, call 432-2912. Field Methods

Real Estate Division

For further information on the courses listed below, call 432-5060. Sales and Acquisition—How to Avoid Making Costly Errors Increasing Your Sales Potential Second Mortgages: Investment for the 1980s

Fitness and Lifestyle Courses

For further information on the courses listed below or to receive the Summer brochure, call 432-2015. Relaxercise Fitness and Lifestyle for Seniors

Visual Arts

For further information on the courses listed below, call 432-3034. Calligraphy Workshop The Design of Silk Kimona Spring Landscape '83 - Canmore Summer Landscape '83 - Lily Creek Summer Landscape '83 - Cypress Hills Summer Landscape '83 - Pincher Creek Summer Landscape '83 - Bragg Creek Summer Landscape '83 - Kananaskis Summer Landscape '83 - Kootenay Plains

Notices

Swimming Registrations

Swimming registrations are being taken by the Faculty of Physical Education and Recreation for six summer swimming lesson programs. The dates are as follows: 30 April to 19 June (weekend classes on Saturday or Sunday), 2 to 27 May, 30 May to 24 June, 27 June to 12 July, 25 July to 5 August, and 8 to 20 August.

The classes are offered to adults and children at all Red Cross Learn to Swim levels, RLSS Life Saving, and in specialty areas (diving, synchronized swimming, family lessons, snorkelling, canoeing). For registration information, call 432-3570.

Clinical Sedative Trial

Insomniacs: Do you have a severe sleep disturbance? Clinical sedative trial underway in the Clinical Sciences Building. Call Diane at 432-6564 or 432-6566.

Positions Vacant

The University of Alberta is an equal opportunity employer but, in accordance with Canadian Immigration requirements, these advertisements are directed to Canadian citizens and permanent residences.

Non-Academic Positions

To obtain further information on the following positions, please contact Personnel Services and Staff Relations, 2-40 Asiniboia Hall, telephone 432-5201. As positions are filled on an on-going basis, these vacancies cannot be guaranteed beyond 29 April 1983. Salaries are currently under review. For a more up-to-date listing, please consult the weekly Employment Opportunities Bulletin and/or the postings in P.S.S.R.

Admissions Records Trainee (\$1,232-\$1,487) Registrar's Office Chemical Technician I (Trust, Part-Time) (\$713-\$877) Chemistry Technician I (Trust) (\$1,426-\$1,754) Medicine Technologist II/III (Trust, Part-Time) (\$808-\$1,133) Pediatrics Biology Technologist I (Trust) (\$1,616-\$1,992) Genetics Programmer/Analyst III (\$2,472-\$3,085) Computing Services

For vacant library positions, please contact the Library Personnel Office, 5th floor, Cameron Library, telephone 432-3339.

Advertisements

Advertisements must reach the Editor by 3 p.m. on the Thursday prior to publication date which date also serves as the deadline for cancellation of advertisements. The cost of placing advertisements is 30 cents per word with no discount for subsequent insertions. There are no refunds. There is a maximum limit of thirty words and a minimum charge of \$1.50. Contributors' corrections will be assessed at \$1.50 for each line in which an insertion is made. Advertisements cannot be accepted over the telephone.

Accommodations available

For rent - August 1983 - June 1984. Furnished, three bedroom bungalow. Duggan. 436-6606.

Owner sale - Golf Course location, 1,800', four bedroom, split, three baths, fireplace, family/recreation rooms, two car garage. Mortgage \$90,000 (13 3/4%-1987). \$129,900. No agents. 432-5762, 463-8371.

Luxury, rural, condominium lots - Just east of Jasper Park, now available, beside Overland Lodge. Services include spring water, telephone, cable T.V., natural gas, electricity. Call evenings, Brigham Day at 432-7950.

Owner sale - Renovated home, close to University. Four bedrooms, studio, two bathrooms, new kitchen, hardwood floors throughout. Beautiful, treed, double lot. Double garage. Heated pool. Possession July. Under \$120,000. 435-4387.

For sale - Executive townhouse, immediate possession, west end. 435-0250.

For sale - Parkallen. Semi-bungalow with charming kitchen, double garage, in quiet location. \$87,500. Call DeAnna Larson 481-0936, 436-5250. Spencer's.

For rent - July and August, Greenfield, furnished, three bedroom home. Reasonable rent in exchange for good care. 434-9635, 432-2373.

Car parking stalls for rent, \$25 per month. Concord Tower, 11147-82 Ave. Ste. 101. 433-1676.

For rent - Sabbaticant, fully furnished, four bedroom, convenient home. Blue Quill. Reasonable rent, references. Aug. '83 - July '84. Work, 432-5979; res., 436-9302.

For rent - Millwoods. Three bedroom townhouse. Close, bus/schools. \$490. No pets. 1 June. 462-7015, 432-5241.

For sale - Four blocks from campus. Two bedroom, uniquely decorated home with partly finished basement, garage. 437-1291, 432-6307. No agents.

For rent - July/Aug. Super environment, 1,600 sq. ft. bungalow, totally finished, cedar sundeck, grand piano, library, fireplace, fine art. Westend, 15 minutes to campus. 484-1997. References.

For rent - Two blocks from campus. Two bedroom condominium. Fully furnished. Air conditioned. 1 1/2 baths. Washer, dryer, dishwasher, heated parking. July 1983 - June 1984. \$900/month. 432-2306, 432-1764 evenings.

For rent - 1 July - 31 Aug. 1983. Aspen Gardens, family home, five bedrooms, three baths. Fenced, garden. On University bus route. Non-smoker. References. 436-4006 after 5 p.m.

For rent - Deluxe, two bedroom. \$450/month. 6720-112 St.

For rent - \$675/month, unfurnished, three bedroom house, garage, McKernan area, walking distance to University, starting 1 July 1983. Phone 436-0408.

For rent/lease - Boulevard, 145 Laurier Drive. Four bedroom home, finished basement, treed yard. \$995. 488-6560, 435-6601 evenings.

For rent - Furnished, four bedroom, historic home with river views. Convenient

for jogging and bike trails. Twenty minutes University. Patio, mature gardens, sauna, attic studio/study. Available Sept. 429-2226 res., Taylor. \$850 p.m.

For sale - Quiet, Malmo location, bus route. Open beam bungalow, three bedrooms, three baths. Extra bedroom, rec. room down, large landscaped lot. Regina Proudfoot. Royal Trust, 435-4869; res., 436-2556.

For sale - Southside, excellent value. Fine two-storey home, quietly located, easy access downtown/University, parks, major shopping. Realistically priced \$94,900. Kevin, 481-0245, 1-551-0149 toll free.

For sale - Walk to campus. Large, four bedroom home with unique kitchen and hardwood. Large lot. \$87,900. Tremendous value. Call 439-0035, 436-1134. Mr. Lebrecht, Crescent Realty.

Accommodations wanted

House in Lansdowne or Riverbend -visiting professor for 1983-84. 432-5669, 435-7167.

Visiting professor and family (children ages 4 and 7) need furnished home. Mid-June through Aug. Careful tenants. Local references. 432-3541.

Autos and others

1973 Honda 250, good condition, low mileage, \$350. 439-4284 or 988-5127
1977 Pontiac Catalina. Air, 4-door, 45,000 miles, top condition. \$4,200. 452-6888.

Goods for sale

For sale - Teak sofa and chair. \$500. 488-4951.

Services

Donnic Word Processing. Specializing in theses, manuscripts, etc. 8315A-105 St. 432-1419.

Singing teacher, Eileen Turner 439-4661.

Back Basics! Total care for back and spine! Medical massages - unique physiotherapy. Spine specialist, Maria Krieg, University trained in Duesseldorf. Gift certificates. 11627-75 Ave. 436-8059.

Professional typist - Word processing. Specializing in theses and dissertations. Gwen, 467-9064.

For all your typing - large or small. Southside Secretarial Services, 9629-82 Ave. 432-9414.

Attention singles! Join our fascinating, congenial group for socials, conversation, dining, sports. For information, call 458-0389, 468-6215, 482-6795.

City Secretarial Service. Word processing. Typing - Résumés, papers, theses, photocopying - transparencies. 432-0138.

Typing - Theses, etc. Experienced. 455-0641.

Books bought and sold - The Edmonton Book Store in the HUB Mall will pay cash for book collections and individual, rare items. Appraisals available. Open seven days a week. 433-1781.

Come on Let's go To the University's Light and Bright Games Breakfast

Thursday, May 12
7:30 to 10:30 a.m., CAB Cafeteria

For \$2 you'll get:
sunny orange juice
fruit filled crepes
a continental sweet roll
unlimited coffee

And, for your added entertainment . . .
WUGIE will do his boogie and Universiade will provide other live entertainment from their Kaleidoscope program.
Your hosts, Housing and Food Services, look forward to seeing you there.
Tickets at the door.

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